[illegible], B.I.; [illegible], Yu.V.; [illegible], Ye.K.

[illegible] dyes fro[illegible] 1,4-diaminoanthraquinone. Izv.vys.ucheb. zav.;khim.i khim.tekh. 4 no.3:477-481 '61. (MIRA 14:10)

1. Moskovskiy institut narodnogo khozyaystva imeni Plekhanova, kafedra organicheskoy khimii.

(Azo dyes)
(Anthraquinone)

KOZLOV, V.V.; DAVYDOV, A.A.

Anthraquinone series. Part 28: Characteristics of the reaction involving the chlorination of α-anthraquinonesulfonic acid by salts of chloric acid. Zhur.ob.khim. 30 no.10:3456-3464 O '61. (MIRA 14:4)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V.Plekhanova.
(Anthraquinonesulfonic acid) (Chloric acid)

KOZLOV, V.V.; DAVYDOV, A.A.

Anthraquinone series. Part 32: Oxidative chlorination of anthraquinone-α-sulfonic acid. Zhur.ob.khim. 31 no.6:2049-2052 Je '61. (MIRA 14:6)

1. Institut narodnogo khozyaystva imeni G.V.Plekhanova.
(Anthraquinonesulfonic acid) (Chlorination) (Oxidizing agents)

BELOV, B.I.; KOZLOV, V.V.

Diazo compounds. Part 14: Diazotization of aromatic amines with nitrite in solutions of saturated carboxylic acids. Zhur.ob.khim. 31 no.7:2212-2217 Jl '61. (MIRA 14:7)

1. Moskovskiy institut narodnogo khozyaystva imeni B.V. Plekhanova.

(Amines) (Diazo compounds)

KOZLOV, V.V.; BELOV, B.I.

Diazo compounds. Part 15: Diazotization of aromatic amines with nitrite in oxycarboxylic acids. Zhur.ob.khim. 31 no.7: 2217-2221 Jl '61. (MIRA 14:7)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V. Plekhanova.
(Amines) (Diazo compounds)

KOZLOV, V.V.; VESELOVSKAYA, I.K.

Naphthalene series. Part 21: Action of ammonia on naphthoates and certain naphthol esters. Zhur.ob.khim. 31 no.8:2662-2667 Ag '61. (MIRA 14:8)
(Naphthoic acid) (Ammonia) (Naphthol)

KOZLOV, V.V.; VESELOVSKAYA, I.K.

Naphthalene series. Part 22: Amination of dihydroxynaphthalenes.
Zhur.ob.khim. 31 no.9:3030-3033 S '61. (MIRA 14:9)
(Naphthalenediol) (Amination)

KOZLOV, V.V.; SUVOROVA, S.E.

Naphthalene series. Part 23: Oxidative nitration of α-selenocyanonaphthalene and naphthalene α, α'-diselenide. Zhur.ob.khim. 31 no.9:3034-3037 S '61. (MIRA 14:9)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V.Plekhanova.
(Selenocyanic acid) (Naphthalene) (Oxidation)

KOZLOV, V.V.; KOLESNIK, Yu.A.

Anthraquinone series. Part 33: Reactions of anthraquinonesulfonic acids with basic dyes. Zhur.ob.khim. 31 no.10:3448-3453 O '61. (MIRA 14:10)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V.Plekhanova.
(Anthraquinonesulfonic acid) (Dyes and dyeing)

KOZLOV, V.V.; DAVYDOV, A.A.

Anthraquinone series. Part 34: Special features of chlorination of β-sulfonic acid of antraquinone to chloroanthraquinone. Zhur. ob. khim. 31 no. 11:3665-3667 N '61. (MIRA 14:11)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V. Plekhanova.
(Anthraquinonesulfonic acid) (Anthraquinone)

SOLNTSEVA, R. R.; KOZLOV, V. V.

Insoluble azo dyes from diazotated aminoanthraquinones in capron dyeing. Izv. vys. ucheb. zav.; khim. i khim. tekh. 5 no.5:800-803 '62. (MIRA 16:1)

1. Moskovskiy institut narodnogo khozyaystva imeni Plekhanova, kafedra organicheskoy khimii.

(Azo dyes) (Dyes and dyeing—Nylon)

KOZLOV, V.V.; SUVOROVA, S.E.

Derivatives of benzene. Part 1: Oxidative-hydrolytic conversion of nitrobenzenemonosulfonic acids. Zhur.ob.khim. 32 no.4:1235-1241 Ap '62. (MIRA 15:4)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V.Plekhanova.
(Benzenesulfonic acid)

KOZLOV, V.V.; KOLESNIK, Yu.A.; SILAYEVA, T.D.; KAZITSINA, L.A.

Studies of the anthracene and anthraquinone series. Part 35: Ultraviolet absorption spectra of anthracenemonosulfonic acids. Zhur.ob.khim. 32 no.4:1241-1245 Ap '62. (MIRA 15:4)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V.Plekhanova.
(Anthracenesulfonic acid--Spectra)

KOZLOV, V. V.; VOL'FSON, T. I.; IODKO, M. O.; KOZLOVA, N. A.; TUBYANSKAYA, G. S.

Naphthalene series. Part 26: Conversions of monosulfonic acids of naphthalene to dinaphthyl sulfones. Zhur. ob. khim. 32 no.12:4074-4076 D '62. (MIRA 16:1)

(Naphthalenesulfonic acid) (Sulfone)

KOZLOV, V. V.; VOL'FSON, T. I.; IODKO, M. O.; KOZLOVA, N. A.; TUBYANSKAYA, G. S.

Naphthalene series. Part 27: Conversions of naphthalenesulfonyl chlorides to dinaphthyl sulfones. Zhur. ob. khim. 32 no.12:4077-4079 D '62. (MIRA 16:1)

(Naphthalenesulfonyl chloride) (Sulfone)

KOZLOV, V.V.; ZIL'BERMAN, N.I.; BROZOVSKIY, D.I.; DEMKOVA, L.N.; SILAYEVA, T.D.

Fusion of 2-naphthol-4-sulfonic acid with alkalies (naphthoresorcinol and trioxynaphthalene). Zhur.prikl.khim. 35 no.4:880-881 Ap '62. (MIRA 15:4)
(Naphthol sulfonic acid) (Naphthalenediol)

BELOV, B.I.; KOZLOV, V.V.

Diazo compounds. Part 16: Particular features in the diazotization of diamines by nitrite in carboxylic acids. Zhur.ob.khim. 32 no.10:3362-3366 O '62. (MIRA 15:11)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V. Plekhanova.
(Amines) (Diazotization)

KOZLOV, V.V.; VOL'FSON, T.I.; KOZLOVA, N.A.; TUBYANSKAYA, G.S.

Naphthalene series. Part 25: Formation of sulfones by the action of chlorosulfonic acid on naphthalene. Zhur.ob.khim. 32 no.10:3440-3445 O '62. (MIRA 15:11)
(Sulfones) (Sulfonic acid) (Naphthalene)

BELOV, B.I.; KOZLOV, V.V.

Advances in the chemistry of aromatic diazo compounds. Usp.khim. 32 no.2:121-153 Usp.khim. 32 no.2:121-153 F '63. (MIRA 16:4)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V.Plekhanova.
(Diazo compounds)

KOZLOV, V.V.; TUBYANSKAYA, G.S.

Naphthalene series. Part 28: Alakaline fusion of disulfonic acids of 2,2'-dinaphthyl sulfone (5,5'- and 7,7'-dihydroxy-2,2'-dinaphthyl sulfones; 5-hydroxy-5'-sulfonic acid and 7-hydroxy-7'-sulfonic acid of 2,2'-dinaphthyl sulfone). Zhur. ob.khim. 33 no.2:660-664 F '63. (MIRA 16:2)
(Naphthalenedisulfonic acid) (Sulfones)

KOZLOV, V.V.; IODKO, M.O.; RUDNIK, A.L.; KOZLOVA, N.A.

Naphthalene series. Part 29: Formation of aromatic disulfones.
Zhur.ob.khim. 33 no.2:664-667 F '63. (MIRA 16:2)
(Naphthalenesulfonic acid) (Sulfones)

KOZLOV, V.V.; KOLESNIK, Yu.A.

Diazonium salts of aryl sulfonic acids. Infrared spectra in the region of stretching vibrations of the SO_2 group. Zhur.ob khim. 33 no.3:748-754 Mr '63. (MIRA 16:3)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V. Pleksanova.
(Sulfonic acids) (Diazonium compounds)
(Spectrum, Infrared)

KOZLOV, V.V.; BELOV, B.I.

Diazo compounds. Part 17: Nature of diazotizating agents in a medium of carboxylic acids. Zhur.ob.khim. 33 no.6:1951-1955 Je '63. (MIRA 16:7)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V.Plekhanova.
(Diazo compounds) (Acids, Organic)

PEREVEZENTSEV, B.N., inzh.; KOZLOV, V.V., inzh.

Welding titanium with copper-base alloys. Svar. proizv. no.9:18-19 S '64. (MIRA 17:12)

KOZLOV, V.V.; SHAYEVA, T.D.

Diazo compounds. Part 20: Diazotization of aromatic amines in orthophosphoric acid. Zhur. org. khim. 1 no.9:1663-1667 S '65. (MIRA 18:12)

1. Moskovskiy institut narodnogo khozyaystva imeni S.V. Plekhanova. Submitted July 2, 1964.

KOZLOV, V.V.; MIRZAYEV, K.M.

Effect of recent fractures on the disposition and morphology of glaciers of the Trans-Ili Alatau. Izv. AN SSSR Ser. geog. no. 1: 73-74 Ja-F '66 (MIRA 19:2)

1. Vsesoyuznyy aerologicheskiy trest Ministerstva geologii SSSR.

BRYUKHANOV, V.N.; KOZLOV, V.V.; SULIDI-KONDRAT'YEV, Ye.D.

Earth under a stereoscope; aerial photography helps geologists to determine mineral resources. Priroda 55 no.1:23-32 Ja '66. (MIRA 19:1)

1. Vsesoyuznyy aerogeologicheskiy trest, Moskva.

SOLNTSEVA, R.R.; KOZLOV, V.V., prof., doktor khim. nauk, red.; KOROLEVA, A.P., red.

[Basic information on electronic concepts in organic chemistry; a manual for independent work by students] Nachal'nye svedeniia ob elektronnykh predstavleniiakh v organicheskoi khimii; rukovodstvo dlia studentov pri samostoiatel'nom izuchenii. Pod red. V.V.Kozlova. Moskva, Mosk. in-t nar. khoz. im. G.V.Plekhanova, 1965. 56 p. (MIRA 19:1)

KOZLOV, V.V.

Block structure of the Pamirs-Alay deep-fault zone. Geol.sbor. [Lvov] no.9:145-150 '65. (MIRA 18:12)

KOZLOV, V.V.; SAGALOVICH, V.P.

Reaction of primary aromatic amines with heteropoly acids.
Izv.vys.ucheb.zav.; khim.i khim.tekh. 8 no.4:609-614 '65.
(MIRA 18:11)

1. Moskovskiy institut narodnogo khozyaystva imeni Plekhanova, laboratoriya organicheskoy khimii.

KHRUSTALEVA V.N.; PAPKOVA, K.V.; DAVYDOV, A.A.; BELOV, B.I.; SAGALOVICH, V.P.; KOZLOV, V.V., prof., red.; ISAYEVA, E.N., red.

[Organic chemistry] Organicheskaia khimiia. Moskva. Pts.1-2. 1965. (MIRA 18:12)

1. Moscow. Institut narodnogo khozyaystva. Kafedra organicheskoy khimii.

KOZLOV, V.V.; KONTSAPOV, V.P.; RAZVALYAYEV, A.V.; SUL'DIN-KONDRAT'YEV, Ye.D.; ZAVADSKIY, V.A.

Cretaceous sediments of Syria. Biul. MOIP. Otd. geol. 40 no.3:57-68 My-Je '65. (MIRA 18:8)

KOZLOV, V.V., prof.

Ninth Mendeleev Congress of General and Applied Chemistry.
Zhur.VKHO 10 no.5:482-496 '65.

(MIRA 18:11)

1. Zamestitel' predsedatelya organizatsionnogo komiteta
IX Mendeleyevskogo s"yezda.

PONIKAROV, V.P.; SULIDI-KONDRAT'YEV, Ye.D.; RAZVALYAYEV, A.V.; KOZLOV, V.V.

Tectonics of the Syrian Desert and the history of its formation.
Sov. geol. 8 no.4:112-122 Ap '65. (MIRA 18:7)

L 2477-66 EWT(1) GW
ACCESSION NR: AP5025248 UR/0026/65/000/009/0097/0103
553.523.3

AUTHOR: Kozlov, V. V.; Sulidi-Kondrat'yev, Ye. D.

TITLE: Are there mineral resources on the moon?

SOURCE: Priroda, no. 9, 1965, 97-103

TOPIC TAGS: moon base, moon, lunar surface, selenology, lunar mineral exploitation, lunar mineral resource

ABSTRACT: Referring to both Soviet and non-Soviet sources, the author discusses optimistically the possible presence and eventual exploitation of mineral resources on the moon. It is considered possible, for example, that diamonds of meteoritic origin may be found on the atmosphere-free surface of the moon. Iron oxides may occur in those lunar maria that are characterized by a reddish coloration. The amount of such iron oxide present is probably not so great as to be detectable by present radioastronomical investigations. These deposits, which differ from those on the earth, may be referred to as meteoritic irons. If, as has been suggested by Kozyrev, active volcanism occurs on the moon, the volcanic products may be utilized in many ways. Fumaroles may be active that discharge carbon dioxide. Tests have shown that

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ACCESSION NR: AP5025248

2

a porous volcanic surface, which may be called "lunite," will support loads of 1250 kg/cm^2, a load-carrying capacity adequate for the construction of a lunar base. It is thought that water-yielding ice may be found in the lunar polar regions. Water may also be extracted from certain rocks of both meteoritic (e.g., carbonaceous chondrites) and volcanic origin. Lunar outgassings may serve as the main source for the creation of an artificial atmosphere for lunar bases. Ore containing radioactive elements may provide a power base. Oil and gas may be formed in inorganic processes. Thus, it may prove possible to find rocket fuel ingredients, elements for the creation of solar batteries, oxygen, water, and other minerals to sustain a lunar base. [DM]

ASSOCIATION: Vsesoyuznyy aerogeologicheskiy trest, Moscow (All-Union Aerogeological Trust)

55

SUBMITTED: 00 ENCL: 00 SUB CODE: AA

NO REF SOV: 005 OTHER: 000 ATD PRESS: 4105

BVK

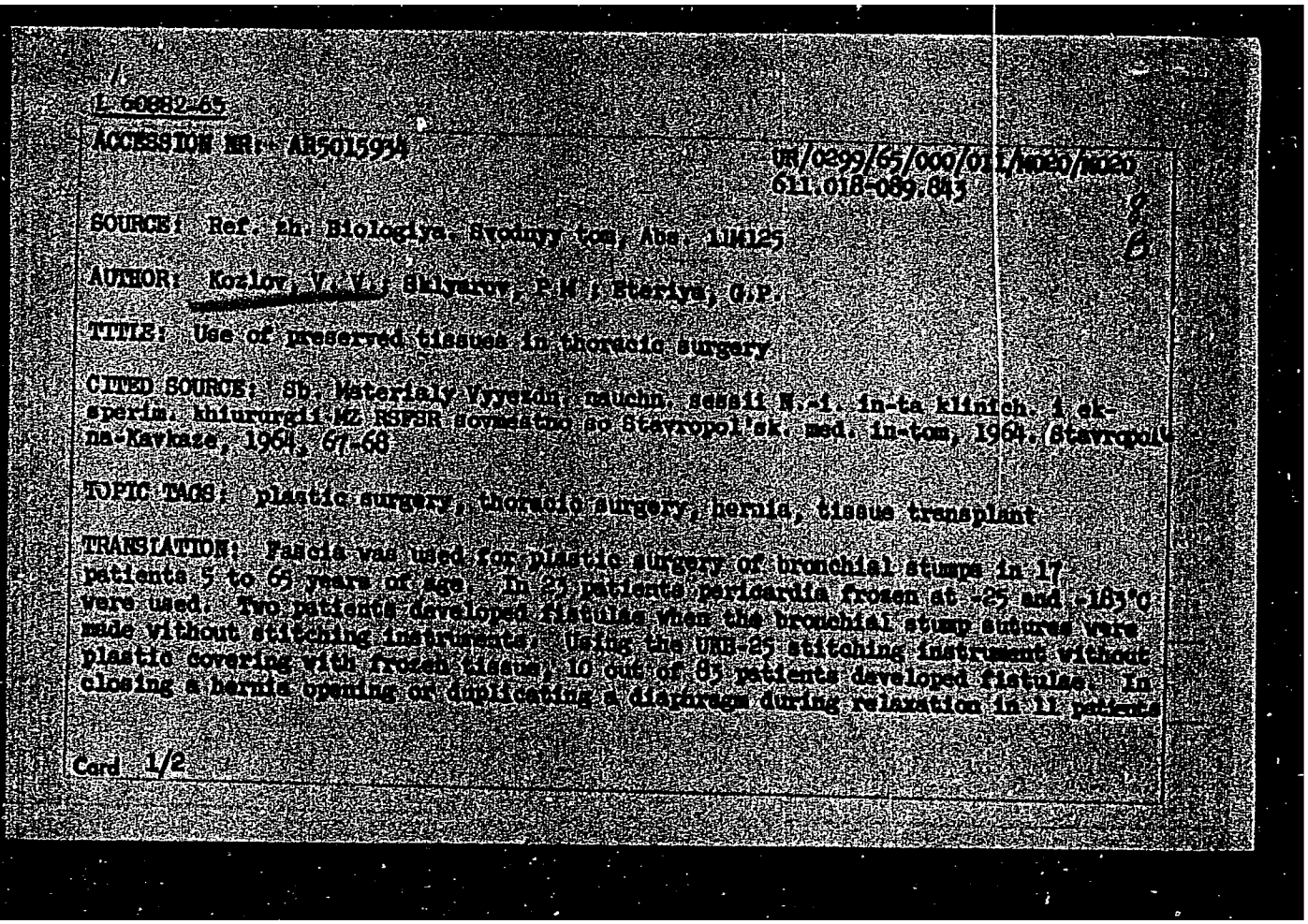
Card 2/2

BORISOV, A.A.; YERMOLAYEV, M.I.; KATTERFEL'D, G.N.; KOZLOV, V.V.; KOZYREV, N.A.; LOZINA-LOZINSKIY, L.K.; LYUBARSKIY, K.A.; SUSLOV, A.K.; FROLOV, P.M.; KHODAK, M.A.

Nikolai Ivanovich Kucherov, 1891-1965; obituary. Izv. Vses. geog. ob-va 97 no.4:388-390 Jl-Ag '65. (MIRA 18:8)

KOZLOV, V.V.

Effect of ammonia additives on the alkali fusion of the salts of aromatic sulfo acids. Khim. prom. 41 no.5:333-335 My '65. (MIRA 18:6)



L 60882-65

ACCESSION NR: AR5015934 UR/0299/65/000/01[illegible]/M060/M060

611.018-089.843

SOURCE: Ref. zh. Biologiya. Svodnyy tom, Abs. 10M125

AUTHOR: Kozlov, V. V.; Shlyakov, P. M.; Starkya, G. P.

TITLE: Use of preserved tissues in thoracic surgery

CITED SOURCE: Sb. Materialy vyyezdn. nauchn. sessii N.-i. in-ta klinich. i eksperim. khirurgii MZ RSFSR sovmestno so Stavropol'sk. med. in-tom, 1964. (Stavropol'na-Kavkaze, 1964), 67-68

TOPIC TAGS: plastic surgery, thoracic surgery, hernia, tissue transplant

TRANSLATION: Fascia was used for plastic surgery of bronchial stumps in 17 patients 5 to 69 years of age. In 23 patients pericardia frozen at -25 and -183°C were used. Two patients developed fistulas when the bronchial stump sutures were made without stitching instruments; using the UKB-25 stitching instrument without plastic covering with frozen tissue, 10 out of 85 patients developed fistulae. In closing a hernia opening or duplicating a diaphragm during relaxation in 11 patients

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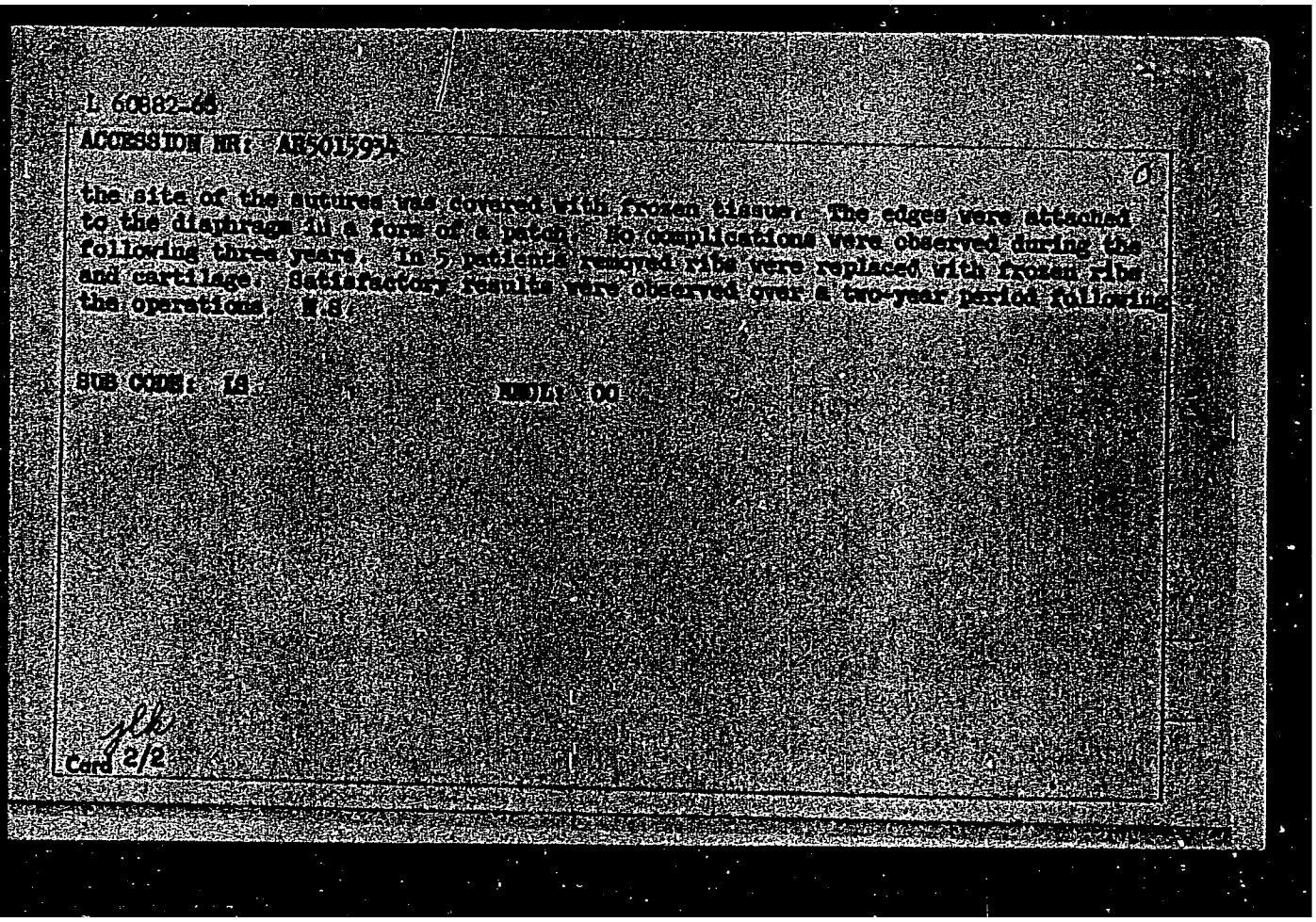

L 60882-65

ACCESSION NR: AR5015934

the site of the sutures was covered with frozen tissue. The edges were attached to the diaphragm in a form of a patch. No complications were observed during the following three years. In 5 patients removed ribs were replaced with frozen ribs and cartilage. Satisfactory results were observed over a two-year period following the operations. M.S.

SUB CODE: LS ENCL: 00

Card 2/2

KOZLOV, V.V., prof.

Honorary members of the Mendeleev All-Union Chemical Society.
Zhur. VKHO no.5:572-575 '64 (MIRA 18:1)

KOZLOV, V. V.

"Certain Changes in the Process of Cell Division During Excitation of the Nervous System," Tezisy IV konfer, aspir. i klin. ordin. LMI (Theses IV Conference of Aspirants and Clinical Orderlies of Leningrad Medical Institute), page 12, 1953.

KOZLOV, V. V.

"Reflex Changes in Mitotic Processes in Normal Tissue and Malignant Tumors of Animals." Cand Med Sci, First Leningrad Medical Inst imeni I. P. Pavlov, Leningrad, 1954. (KL, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

Kozlov, V.V.

USSR/Biology - Histology

Card 1/1 Pub. 22 - 43/47

Authors : Strelin, G. S.; Bychkovskaya, I. B., and Kozlov, V. V.

Title : Inhibition of cell division (fission) in the cornea epithelia of mice during excitation by mechanical irritation

Periodical : Dok. AN SSSR 99/1, 165-167, Nov 1, 1954

Abstract : Histological data on the inhibition of fission in the cornea epithelia of mice, during excitation of the latter by mechanical irritation, are presented. Nine references: 8-USSR and 1-USA (1934-1954). Table; graphs.

Institution : The I. P. Pavlov First Medical Institute, Leningrad

Presented by: Academician N. N. Anichkov, July 9, 1954

USSR/Biology - Histology

Card 1/1 Pub. 22 - 36/40

Authors : Kozlov, V. V.

Title : Changes in the cell fission processes during excitation of the nerve system of animals

Periodical : Dok. AN SSSR 99/2, 317-320, Nov 11, 1954

Abstract : The state of the nervous system of animals (excited and normal) and its effect on the cell fission processes was investigated on a group of mice of same age and sex. Excitation of the animal resulted in certain functional changes which in turn caused disturbances in the cell fission processes. It was established that these disturbances pertain to the period when the cell is being readied for fission and not for mitosis. The level of intracellular metabolism and its effect on the changes in nerve cell fission, is discussed. Eight references: 1-USA and 7-USSR (1934-1954). Tables; graphs.

Institution : .....

Presented by: Academician N. N. Anichkov, July 9, 1954

KOZLOV, V.V.

Lowered mitotic activity in Ehrlich's carcinoma in animals subjected to general excitation. Dokl. AN SSSR 105 no.1:176-179 N '55. (MLRA 9:3)

1. Pervyy Leningradskiy meditsinskiy institut imeni I.P. Pavlova. Predstavleno akademikom L.A. Orbeli.
(CANCER) (KARYOKINESIS)

KOZLOV, V.V.

EXCERPTA MEDICA Sec.5 Vol.9/10 Gen.Pathology Oct 56

2932. KOZLOV V.V. 1st (Pavlov) Med. Inst., Leningrad. The relations between reactivity and developmental conditions of tumour cells (Russian text) DOKLADY AKAD. NAUK SSSR 1955, 105/2 (380-383) Tables 3

In earlier work the intensity of mitosis of the tumour cells was shown to be dependent on the excitation of the experimental animal (strong general stimuli led to decrease of mitotic activity). These investigations had been carried out in compact tumours linked with the organism through vessels and nerves. New experiments were performed in mouse ascites carcinoma, in which the cancer cells proliferate freely in the ascites fluid, without forming compact nodes. After intraperitoneal tumour inoculation, the experimental animals were exposed to electrical stimulation and the mitoses in the ascites tumour cells were counted (5000 cells). No change in mitotic activity was observed, although ohter parts of the body, e.g. the cornea, showed a distinct decrease (down to 81%). Consequently, in the judgement of the mitotic activity, not only the kind of tumour and the intensity of stimulation, but also the mode of development of the tumour are significant.

Brandt - Berlin (V, 16)

KOZLOV, V.V.

AUTHOR: Kozlov, V. V., 20-6-47/47

TITLE: The Influence of a Grafted Tumor Upon the Reactivity of Tissues and Upon the Level of Mitotic Activity in the Organism (Vliyaniye privitoy opukholi na reaktivnost' tkaney i na uroven' miticheskoy aktivnosti v organizme)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 1o89-1o91 (USSR)

ABSTRACT: The author several times observed the different reaction of healthy and tumor-bearing animals to external influences. E.g. the mitotic activity in the epithelium of cornea (? horny layer) of tumor-bearing animals in the case of a total excitation changed less than in healthy animals. The observations were made with mice. Ehrlich-carcinoma was subcutaneously transplanted to animals of the same age and sex. After the tumors were large enough (after 2o-3o days) part of the animals was mechanically irritated (by slight pinching with a forceps) or excited by means of low-voltage current (1o-15 V). The rest of the mice was not irritated ones. (First series of tests). The second series of tests were healthy mice half of whom were in the same manner mechanically or electrically irritated. The results of the reduction of mitotic activity are shown in table 1. The activity of the control group was set up as 1oo%.From table 1 is to be seen that the reactive in-

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hibition of cell division in healthy mice in the epithelium is much more distinct than in animals with transplanted tumor, when other influences upon both groups were equal. This referred to the painful, the mechanical and the electrical irritation. The intensity of cell division in healthy animals was almost entirely suppressed (by 91-93%), which was never observed in animals affected with cancer; Thus the reactivity of cancerous animals and this ability of their normal tissues is reduced. This reduced reactivity also occurs under conditions of the stimulation of cell division, e.g. in the case of additional illumination of the animals (reference 4). The same is confirmed by some clinical observations (references 5,6). This phenomenon apparently is the expression of the modification of those functions of the nervous system which is observed in the case of cancer (references 7,8). Table 2 shows the results of tests with healthy and tumor-bearing mice with regard to the intensity of mitoses in the epithelium of cornea without any irritation. In healthy mice the number of cells in the state of karyokinesis was much higher than in cancerous ones. The influence of a malignant tumor upon the processes of cell division apparently is not specific. The case here is, as it may be assumed,

The Influence of a Grafted Tumor Upon the Reactivity of Tissues and Upon the Level of Mitotic Activity in the Organism. 20-6-47/47

the general changes occurring in the organism in connection with a pathological process. Nevertheless the above-mentioned phenomena show that the development of a malignant tumor does not occur locally and isolated, but that it causes certain changes of the processes in the entire organism, such intimate processes, as the reproduction of cells, not excepted.
There are 2 tables, and 9 Slavic references.

ASSOCIATION:
First Leningrad Medical Institute imeni I.P.Pavlov (**Pervyy** Leningradskiy meditsinskiy institut im. I.P.Pavlov).

PRESENTED: August 15, 1957, by L.A. Orbeli, Academician

SUBMITTED: August 9, 1957

AVAILABLE: Library of Congress

Card 3/3

STRELIN, G.S.; KOZLOV, V.V.(Leningrad, P-154, Zhdanovskaya nab., d.11 kv. 43)

Problem of neurohumoral effects on cell division processes. Arkh.anat.gist. i embr. 36 no.2:3-21 F '59. (MIRA 12:4)

1. Kafedra gistologii i embriologii (zav. - prof. G.S. Strelin) I Leningradskogo meditsinskogo instituta imeni akademika I.P. Pavlova. Adres Strelina: Leningrad, ul. L. Tolstogo, I Meditsinskiy institut, kafedra gistologii.

(CELL DIVISION,
neurohumoral factors, review (Rus))
(NERVOUS SYSTEM, physiol.
neurohumoral eff. on cell division, review (Rus))

KOZLOV, V.V.

Restoration of cell division following reactive depression during inhibition of the sympathico adrenal system. Biul. eksp. biol. med. 47 no.1:92-97 Ja '59. (MIRA 12:3)

1. Iz kafedry gistologii i embriologii (zav. - prof. G.S. Strelin) 1-go Leningradskogo meditsinskogo instituta imeni I.P. Pavlova. Predstavlena deystvitel'nym chlenom AMN SSSR V. N. Chernigovskim.

(CELL DIVISION
reactive mitotic inhib. after prolonged electric stimulation, eff. of epinephrine (Rus))

(EPINEPHRINE, effects,
on reactive mitotic inhib. after prolonged electric stimulation (Rus))

KOZLOV, V.V.; UTTS, R.A.

Fibrous polyp of the epidardium. Arkh. pat. 22 no. 12:61-63 '60.
(MIRA 14:1)

(PERICARDIUM—TUMORS)

SOV/ 20-120-1-45/63

AUTHORS: Kazmin, Yu.B., Kozlov, V.V., Solov'yeva, M. N.

TITLE: On the Middle Carboniferous Deposits of the Zaalayskiy Khrebet (Range) (O srednekamennougol'nykh otlozheniyakh v Zaalayskom khrebte)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 1, pp. 166 - 167 (USSR)

ABSTRACT: Until the latest time here the geological structure, especially the stratigraphy of the upper Paleozoic sediments, was only weakly investigated. They are far spread at the south slope and in the axis part of the chain. A historical survey of the investigation of this region (References 1,2) is given. Here until now no reliable data on faunally proved Middle Carboniferous sediments existed. During the compilation of the geological map of the mentioned chain (1955 - 1957) many new data were obtained, which make possible the exact definition of the stratigraphy of the deposits which are discussed. Here especially marine, faunally characterized Middle Carboniferous sediments were discovered. They were found in the catchment area of the Korzhenevskiy-glacier at the basis of the right boundary of the

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On the Middle Carboniferous Deposits of the Zaalayskiy Khrebet (Range) SOV/20-120-1-45/63

valley. They pass over to the left boundary only in the topmost parts of the glacier. In the west their exposures are covered by uninterrupted corn snow fields of the massif of the Lenin Peak. In the East they are cut off by a steep overfault which brings the Lower Permian and the Paleogene sediments into contact with each other. At the basis of the exposed part of the Middle Carboniferous cross section lies a pack of black massive limestones. A list of the numerous foraminifers which were found beneath lily crinoid members, brachiopode fragments, and bryozoans, is given. Because of this fauna these sediments [illegible] certainty can be ascribed to the Kashirskiy horizon of the Moskovskiy stage (Middle Coal Age). The visible size of the pack is 50-60m. Higher up a pack of mutually dark platy shale limes and loamycarbonate shales follows with rare and little thick (5-7m) interstrata of andesite-porphyrite. Its thickness is 100m. The finding of Choristes priscus speaks for a Middle Carboniferous age (after V.S.Gubareva). Upon the mentioned Middle Carboniferous sediments lies, without visible discordance, a mass of marly shales, conglomerates, limes, and effusives of an

Card 2/4

average composition. According to the fauna this mass corresponds to the lower part of the Schwagerina- horizon. From the character of the cross section of the Middle Carboniferous in the Zaalayskiy chain and from the number of species of the foraminifers the supposition on a uniform sedimentation of the region of the Alayskiy and Zaalayskiy chain and apparently of the Darvaz can be made. There are 1 figure and 4 references, 4 of which are Soviet.

ASSOCIATION: Vsesoyuznyy aerogeologicheskiy trest (All-Union Aerogeological Trust)

PRESENTED: January, 25, 1958 by N. S. Shatskiy, Member, Academy of Sciences, USSR

SUBMITTED: January 23, 1958

On the Middle Carboniferous Deposits of the [illegible]layskiy Khrebet (Range) SOV/20-120-[illegible]

1. Geology--USSR 2. Geological time--Determination 3. Foraminifera --USSR 4. Paleoecology--Applications

Card 4/4

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000825910(

KOZLOV, V.V.

New data on the stratigraphy of Paleogene sediments in the Trans-Alay Range. Geol.sbor. [Lvov] no.7/8:311-314 '61.
(MIRA 14:12)

1. Vsesoyuznyy aerogeologicheskiy trest, Moskva.
(Trans-Alay Range--Paleontology, Stratigraphic)

SOLOV'YEVA, M.N.; KAZMIN, Yu.B.; KOZLOV, V.V.

Structure and stratigraphy of Paleozoic sediments in the trans-Alay Range and the northern Timan Ridge. Izv.AN SSSR. Ser.geol.27 no.2:64-72 F '62. (MIRA 15:1)

1. Geologicheskiy institut AN SSSR i Vsesoyuznyy aerogeologicheskiy trest, Moskva.
(Alay Range--Geology)
(Timan Range--Geology)

ACCESSION NR: AP4009628 S/0293/63/001/003/0460/0464

AUTHOR: Khodak, Yu. A.; Kozlov, V. V.; Tomson, I. N.; Khoroshilov, L. V.

TITLE: Significance of geographic and geological methods in lunar studies

SOURCE: Kosmicheskiye issledovaniya, v. 1, no. 3, 1963, 460-464

TOPIC TAGS: lunar research, lunar geological study, lunar geographic study, lunar structure, lunar relief, lunar history, meteorite lunar theory, astronomy, moon

ABSTRACT: The report offers a brief review of lunar research to date, clarifies the significance of geographic and geological methods for future studies of lunar structure and relief, proposes close coordination of such methods (giving consideration to comparative terrestrial material) with astronomical methods, evaluates various studies of geographic and geological aspects completed thus far, and discusses the meteorite approach to an explanation of the evolution of lunar structure and relief. It is suggested that it will be impossible to clarify the origin of lunar structures and relief, or their pattern of distribution, without the participation of geologists, nor will it be feasible to compile adequate topographic, geographic or selenological-geological charts or diagrams. "The authors acknowledge the contribution of Dr. A. G. Masevich in posing the problem". Orig. art.

Card 1/2

ACCESSION NR: AP4009628

has: no graphics.

ASSOCIATION: none

SUBMITTED: 09May63	DATE ACQ: 30Jan64	ENCL: 00
SUB CODE: AS	NO REF SOV: 019	OTHER: 039

Card 2/2

KOZLOV, V.V. (Moskva); SULIDI-KONDRAT'YEV, Ye.D. (Moskva)

Karst phenomena in the eastern Mediterranean region. Priroda 52 no.9:116-117 '63. (MIRA 16:11)

SULIDI-KONDRAT'YEV, Ye.D. (Moskva); KOZLOV, V.V. (Moskva)

Extinct volcanoes of the Syrian desert. Priroda 52 no.10: 113-114 '63. (MIRA 16:12)

KOZLOV, V.V.; SULIDI-KONDRAT'YEV, Ye.D. (Moskva)

Cross bedding in coastal Mediterranean deposits. Priroda 52 no.11:119-121 '63. (MIRA 17:1)

ACCESSION NR: AP4040510 S/0026/64/000/006/0044/0049

AUTHOR: Kozlov, V. V.; Sulidi-Kondrat'yev, Ye. D.

TITLE: Lunar "geology"

SOURCE: Priroda, no. 6, 1964, 44-49

TOPIC TAGS: astronomy, comparative planetology, moon, lunar geology, lunar surface, lunar tectonics, lunar meteor crater, photogeology, geology

ABSTRACT: Various aspects of lunar geology are discussed. Principal emphasis is on the comparison of the hypotheses of the meteorite and volcanic origin of the craters on the lunar surface. The authors are supporters of the volcanic hypothesis and present a variety of facts in its defense. It is noted that there is a clear periodicity in the formation of lunar relief, making it possible to establish a definite sequence in the formation of craters of different age. The studies of Troitskiy are interpreted as confirmation of the volcanic hypothesis, since it has been demonstrated that the lunar interior is hot. The spectral observations of the emission of gases from the crater Alphonsus are cited as further evidence. The nature of lunar

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ACCESSION NR: AP4040510

rocks then is discussed, with references to recent Soviet studies in this field. The well-known conclusions of Troitskiy are summarized briefly: the surface is very porous, consisting of matter similar to pumice and having a low heat conductivity. Lunar matter is close to terrestrial alumino-silicate rocks. Radio observations have detected little meteoric iron in the surface layers of the moon; the brown color of the surface can be attributed to various other factors than the presence of iron. The presence of bright rays emanating from certain craters and their absence elsewhere may only be due to a change of color with time. Erosional factors undoubtedly operate on the moon; the factors responsible and their mechanisms are discussed briefly. Photographs clearly show that tectonic forces have played an exceptional role in the development of lunar relief, more so than on earth; there are important differences in the tectonic patters of the lunar seas and continents. Endogenic processes obviously were of enormous importance on the moon and fit in with the volcanic hypothesis. The matter of lunar mapping and photogeological interpretation of its surface are discussed in relation to the geochronology of the moon, but only briefly. It is noted that such work is essential for selection a site for lunar landings. The advantages to be obtained from

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ACCESSION NR: AP4040510

development of the science of comparative planetology are presented. It is noted that although the influence of the moon on terrestrial ocean tides has been thoroughly investigated, too little has yet been done on study of its influence on earth tides. The authors are opposed to the coining of special words to apply to lunar phenomena and favor use of the words applied to equivalent earth processes. Orig. art. has: 8 figures.

ASSOCIATION: Vsesoyuzny*y aerologicheskiy trest, Moskva (All-Union Aerological Trust)

SUBMITTED: 00 ENCL: 00

SUB CODE: AA NO REF SOV: 000 OTHER: 000

Card 3/3

PONIKAROV, V.P.; SULIDI-KONDRAT'YEV, Yu.D.; KOZLOV, V.V.; KAZ'MIN, V.G.

Tectonics of the northern part of the Arabian Platform.
Sov. geol. 7 no.1:39-48 Ja '64. (MIRA 17:6)

SULIDI-KONDRAT'YEV, Ye.D. (Moskva); KOZLOV, V.V. (Moskva); TAMRAZYAN, G.P. (Baku); FRANK-KAMENETSKIY, D.A., prof. (Moskva)

Articles on geological cycles. Priroda 53 no.1:102-111 '64. (MIRA 17:2)

KOZLOV, V.V.; SULIDI-KONDRAT'YEV, Ye.D.

Lunar "geology." Priroda 53 no.6:44-49 '64. (MIRA 17:6)

1. Vsesoyuznyy aerologicheskiy trest, Moskva.

KOZLOV, V.V.

Problems of volcanism. Priroda 53 no. 12:94-96 '64.
(MIRA 18:1)

1. Vsesoyuznyy aerogeologicheskiy trest, Moskva.

KOZLOV, V.V. (Moskva); SULIDI-KONDRAT'YEV, [illegible]

In the Syrian Desert. Priroda [illegible]

(MIRA 18:5)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R00082591000

BRYUKHANOV, V.N.; KOZLOV, V.V.

Methods for speeding-up medium scaled geological mapping. Sov. geol. 7 no.6:128-134 Je '64 (MIRA 18:1)

1. Vsesoyuznyy aerologicheskiy trest.

KOZLOV, V.V.

Effect of the preserve system on mammals of the Meshchera lowland. Zool. zh ur. 33 no.4:925-944 Jl-Ag '54. (MLRA 7:8)

1. Okskiy gosudarstvennyy zapovednik.
(Meshchera--Wild life, Conservation of) (Wild life, Conservation of--Meshchera)

KOZLOV, V.V.

Mass mortality of wild ducks in the Oka Game Preserve (Ryazan Province) during the spring 1949. Zool.zhur.35 no.3:472-473 Mr '56. (MLRA 9:7)

1.Okskiy gosudarstvennyy zapovednik.
(Ryazan Province--Ducks)

KOZLOV, V.V.

Asphyxiation of fishes in the Oka River. Zool.zhur. 35 no.6: 936-937 Je '56. (MLRA 9:10)

1. Gosudarstvennyy zapovednik "Stolby."
(Oka River--Fishes)

Kozlov, V.V.

AUTHOR: Kozlov, V.V. 26-12-8/49

TITLE: Pollution of the Yenisey River (O zagryaznenii reki Yenisey)

PERIODICAL: Priroda, 1957, No 12, p 40 (USSR)

ABSTRACT: The author complains about the Yenisey river being polluted by industrial installations in Krasnoyarsk and its suburbs. These industries are located on both sides of the river covering an area of many kilometers. Most of the plants are lacking in purifying devices and discharge their sewage directly into the river. A number of chemical and metallurgical plants dump their waste material and rubbish in winter on the ice, along both banks, in the neighborhood of the city. All this rubbish even contaminates the waters of such a rapidly flowing river as the Yenisey, killing fish and rendering bathing impossible in an area of many kilometers. Similar violations are tolerated in many cities located along rivers, and the author suggests that urgent measures ought to be taken to prevent the fatal effects caused by the pollution of canals and rivers.

ASSOCIATION: State Game Reservation "Stolby" (Region of Krasnoyarsk) (Gosudarstvennyy zapovednik "Stolby" (Krasnoyarskiy kray)

AVAILABLE: Library of Congress

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KOZLOV, V.V

KOZLOV, V.V.

Wild boars in Ryazan Province [with summary in English]. Zool. zhur. 37 no.1:142-143 Ja '58. (MIRA 11:2)

1. Gosudarstvennyy zapovednik "Stolby."
(Ryazan Province--Wild boar)

KOZLOV, V.V. (Moskva); SULIDI-KONDRAT'YEV, Ye.D. (Moskva)

Speed of eolation in the Syrian desert. Priroda 51 [i.e. 52] no.5:114 '63. (MIRA 16:6)

(Syrian desert—Weathering)

BLINNIK, Lazar' Borisovich; KOZLOV, Vladimir Vasil'yevich; TUCHINSKIY, Naum Vladimirovich; PAGAZINA, M.F., inzh., ved. red.; SAMOKHOTSKIY, A.I., inzh., red.; SOROKINA, T.M., tekhn. red.

[Efficient conditions for the aging of cast iron]Ratsional'nye rezhimy stareniia chugunnykh otlivok. Moskva, Filial Vses. in-ta nauchn.i tekhn. informatsii, 1958. 12 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyy opyt. Tema 3. No.M-58-112/5) (MIRA 16:2)

(Cast iorn--Hardening)

VOSKRESENSKIY, P.I.; PERSHINOV, K.Ya. [deceased]; [illegible]; EPSHTEYN, D.A.; GLORIOZOV, I.A., [illegible] kand.khim.nauk, retsenzent; STAKHANOVA, M.S., kand.khim.nauk, retsenzent; KOZLOV, V.V., red.

[Handbook of chemistry for secondary school students] Spravochnik po khimii dlia uchashchikhsia srednei shkoly. Moskva, Prosveshchenie, 1964. 359 p. (MIRA 18:2)

1. Chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR (for Gloriozov).

L 16296-65 EWT(m)/EWP(w)/EWA(d)/EWP(v)/EWP(t)/EWP(k)/EWP(b) Pf-4
IJP(c)/ASD(f)-2/ASD(m)-3/ [illegible]
ACCESSION NR: AP4045722 S/0135/64/000/009/0018/0019

AUTHOR: Perevezentsev, B. N. (Engineer); Kozlov, V. V. (Engineer)

TITLE: Brazing of titanium to copper-base alloys

SOURCE: Svarochnoye proizvodstvo, no. 9, 1964, 18-19

TOPIC TAGS: titanium, OT4 titanium alloy, OT4 alloy brazing, silver base brazing alloy, optimum brazing conditions, brazed joint strength

ABSTRACT: An investigation has been made of the effect of the temperature and duration of brazing on the strength and ductility of the brazed joints between titanium OT4 alloy [U.S. RS1013] and Br.Kh 08 bronze. Brazing was done in a vacuum of (5—8)·10⁻² or 5·10⁻³ mm Hg, at a temperature varying from 800 to 860C and exposure time varying from 3 to 30 min. The surfaces to be brazed had no protective coating; three silver-base brazing alloys were used. The microhardness of the constituent phases and their distribution across the joint from titanium toward copper was the criterion of

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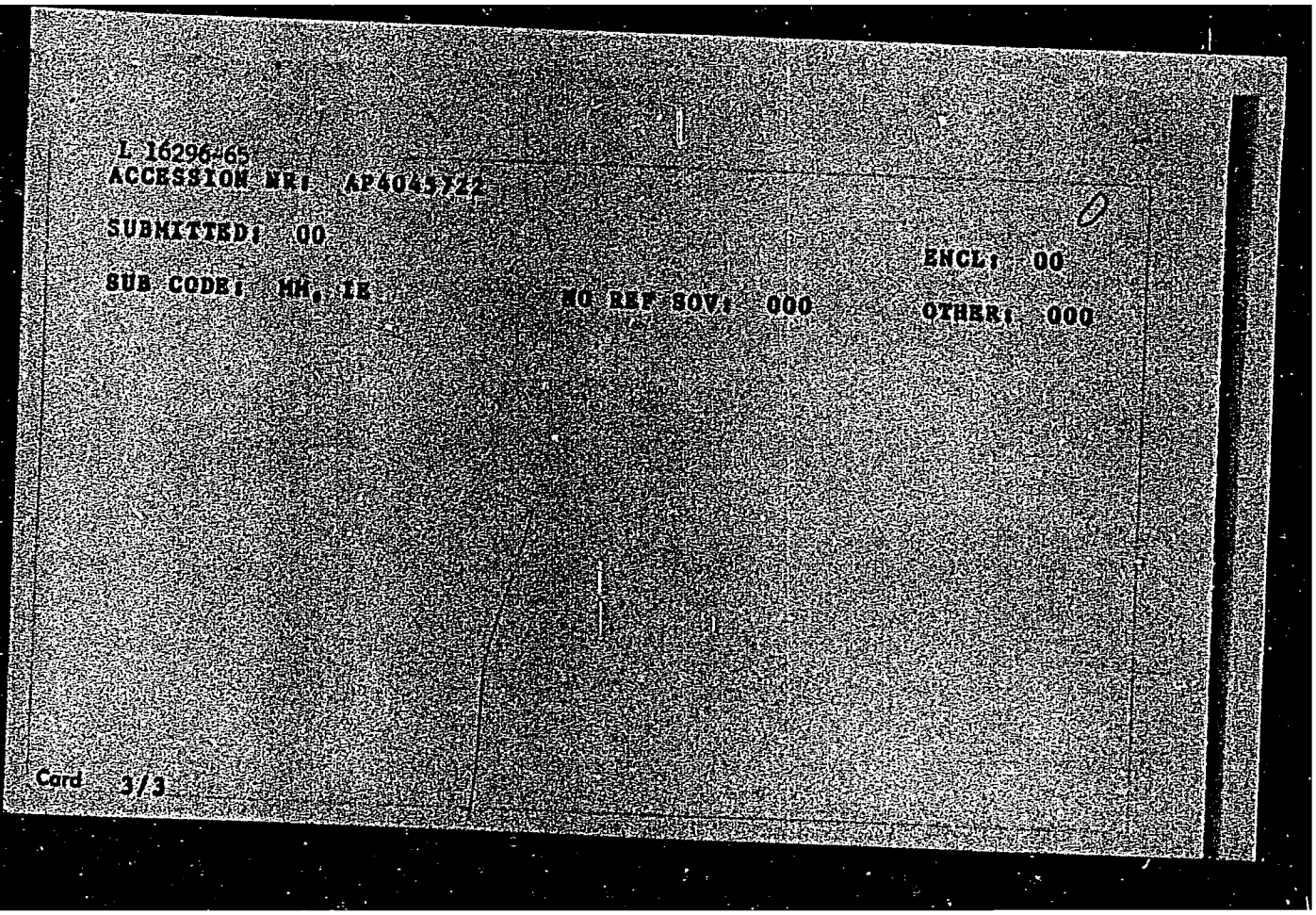
ACCESSION NR: AP4045722

the joint ductility. In brazing with a PSr25 brazing alloy, the strongest joints with a tensile strength of 12—13.5 kg/mm² were obtained after a 5-min exposure at 820—830C. Under identical conditions brazing with a PSrMO-68-12-5 alloy produced sound ductile joints with a tensile strength of 14.5—17.5 kg/mm² and a shear strength of 13.5—16 kg/mm². The strongest joints with a tensile strength of 20—27 kg/mm² and a shear strength of 14.5—18 kg/mm² were obtained using foil of a PSr12 brazing alloy placed between the parts being joined. Most of the joints failed under a stress of 22—24 kg/mm². The rate at which the material is heated to the brazing temperature noticeably affects the strength of the joints; thus, with a heating rate of 30 and 10 deg/min, the strength of the joints is 27 and 20 kg/mm², respectively. The optimum temperature range and duration of brazing, 820—830C and 5 min, respectively, were the same as those for other brazing alloys. Orig. art. has: 6 figures.

ASSOCIATION: none

Card 2/3



KOZLOV, V.V.; PRONYAKOVA, V.M.

Naphthalene series. Part 30: α -Naphthalenesulfonic acid. Sur.org. khim. 1 no.3:493-497 Mr '65. (MIRA 18:4)

1. Moskovskiy institut narodnogo khozyaystva im. G.V.Plekhanova.

KYZLOV, V.V.; DAVYDOV, A.A.

Benzene derivatives. Part 3: Oxidative chlorination of benzenesulfonic acids. Zhur.org.khim. 1 no.3:559-562 Mr '65. (MIRA 18:4)

1. Moskovskiy Institut narodnogo khozyaystva imeni G.V.Plekhanova.

ALEKSYUK, I.M., inzh.; KOZLOV, V.Ye., kand. tekhn. nauk; SOBOLEV, G.P., kand. tekhn. nauk; SOLDATOV, G.A., inzh.; SOROKIN, M.F., inzh.

Centrifugal mill for the grinding of clay materials. Stek. i ker. 22 no.7:27-30 Jl '65. (MIRA 18:9)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina (for Aleksyuk, Kozlov, Sobolev). 2. Khar'kovskiy plitochnyy zavod (for Soldatov, Sorokin).

Kozlov, V. Ya.

137-58-5-9689

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 118 (USSR)

AUTHORS: Entin, S.D., Kozlov, V.Ya.

TITLE: An Electromagnetic Instrument for Determination of Ferrite in Welds in Austenitic Steels (Elektromagnitnyy pribor dlya opredeleniya ferrita v svarnykh shvakh austenitnykh staley)

PERIODICAL: V sb.: Fiz-khim. issled. austenitn. splavov. Moscow, Mashgiz, 1957, pp 255-259 [TRUDY TSNIITMASH V. 84]

ABSTRACT: The linear ratio of the magnetization to the intensity of the magnetic field at 1000-1500 oersteds and the proportionality between the slope of the magnetization curves and the quantity of ferrite phase has been employed to develop an instrument using A-C and a differential network to determine the amount of ferrite in austenitic alloys. The basic electrical circuit of the instrument consists of a field winding 1 having 8000 turns of PE wire, 0.7 mm gage; 2 measuring windings 2 of 0.16 mm gage PE wire, 7000 turns each, in differential connection; a one-amp A-C ammeter 3 to measure the current in the field winding; a 25-microfarad capacitor 4 connected in series with the field-coil circuit to increase the current therein by reducing

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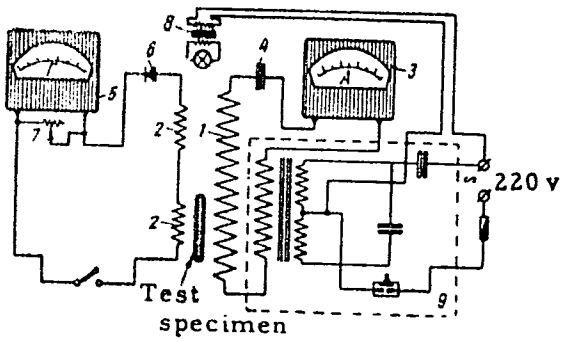
An Electromagnetic Instrument (cont.)

the phase shift between current and voltage; a 17-mv galvanometer 5 to measure the emf when the test specimen is introduced into one of the measuring windings; a DGTs8 germanium diode 6 to rectify the alternating emf; a gal-



vanometer shunt 7 for up to 15 ohms to vary the sensitivity of the galvanometer; a step-down transformer 8 to feed the signal tube and the ferro-resonance stabilizer 9 with 40 v to stabilize the voltage in the field winding. The instrument is used with specimens 5 mm in diameter and 60 mm long. It can be used to

137-58-5-9689

An Electromagnetic Instrument (cont.)

determine the amount of ferrite in austenitic alloys with an accuracy of 0.2%, if this content does not exceed 5%, and with an accuracy of 0.5-0.7% if the content is up to 15%.

V.S.

1. Ferrites--Determination 2. Welds--Chemical analysis 3. Chemical analysis --Instrumentation 4. Electromagnetism--Applications

Card 3/3

[illegible], Yu. B., LYTKIN, V. B., KOZLOV, V. Ya., [illegible], V. O., [illegible], L. A., KRASIN, A. K., SEVERIANOV, V. S., [illegible], B. A., UNAIDN, G. N.,

"Operating Experience of the APS-1."

Paper presented at the Symposium on Small and Medium Reactors, Vienna, 5-9 Sept 60

KOZLOV, V.YA.

82280
S/089/60/009/01/02/011
B014/B070

21.1920

AUTHORS: Dolgov, V. V., Kozlov, V. Ya., Kochetkov, L. A., Sudnitsyn, O. A., Ushakov, G. N.

TITLE: Investigation of the Starting Conditions of an Atomic Power Station With a Uranium Graphite Reactor Working With Superheated Steam

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 1, pp. 10-15

TEXT: In a specially adapted steam-to-water loop of the first Soviet nuclear power station, the investigation mentioned in the title was carried out by three methods, where the steam was generated in the reactor of the power station. The heat engineering parameters were measured by means of the arrangement shown in Fig. 1. The analysis of the methods applied must satisfy the following requirements: (a) The method applied at the start must permit a rapid rise from zero to the rated power. (b) Under the transient conditions the maximum temperature of the fuel elements must not exceed the temperature which the fuel elements have at

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82280

Investigation of the Starting Conditions of an Atomic Power Station With a Uranium Graphite Reactor Working With Superheated Steam

S/089/60/009/01/02/011
B014/B070

the rated power. (c) Under the transient conditions, it must be possible for the temperature of the fuel elements to be continuously increased. (d) The method applied at the start must require minimum operation of the technological equipment. In the first method, the transient is characterized by the following: (a) The temperature of the fuel elements can be increased by 100 - 150°C in a minute. (b) The transition to superheating does not take place simultaneously in the various channels of the steam-to-water loop. (c) In the secondary cycle, a marked change of pressure takes place, which necessitates an intensive blowing of this loop. During the transient the second method produces a definite cooling of the channels in which the steam is generated. Thus, the whole transition takes place with a minimum of reactor power. With the third method it is possible to prevent an upward temperature jump by lowering the reactor power from the moment of transition to superheating conditions. The abrupt fall of temperature is shortened by a smaller reduction of the reactor power and the blowing through of the channels in which the steam is generated. All results are graphically represented.

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Investigation of the Starting Conditions of an Atomic Power Station With a Uranium Graphite Reactor Working With Superheated Steam

S/089/60/009/01/02/011
B014/B070 82280

A team of engineers under P. I. Aleshchenkov participated in the solution of the technical problems. A. K. Krasin and A. N. Grigor'yants followed the work with interest. There are 7 figures and 3 Soviet references.

4

SUBMITTED: August 17, 1959

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82731
S/089/60/009/002/002/015
B006/B056

21.1920

AUTHORS: Slyusarev, P. N., Ushakov, G. N., Starkov, O. V., Kochetkov, L. A., Nesterova, L. N., Kozlov, V. Ya.

TITLE: Investigation of the Transfer of Radioactive Substances by Steam and Water and the Chemical Stability of Deposits in the Steam - Water Cycle of the First Atomic Power Plant 79

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 2, pp. 98-105

TEXT: The quantity of radioactive substances carried along in boiling-water reactors by steam and water, their depositing on the inner surfaces of conduction pipes, as well as the chemical nature and the behavior of these deposits depends essentially on the mode of operation of the reactor and the construction of the evaporators and separators. In the plants of the Pervaya atomnaya elektrostantsiya (First Atomic Power Plant), the authors investigated the processes in which radioactive substances are carried along by steam and water. They determined the depositing coefficient of the substances on the inner surfaces of the conduction pipes and investigated the chemical stability of these deposits. They further

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investigated problems of the deactivation of some parts of the steam-power equipment of the plant. The steam-water loop consists of two circuits of stainless steel of the grade 1X18H9T (1Kh18N9T), which are insulated against each other. Fig. 1 schematically shows the investigated loop; Table 1 gives data on the two circuits. The coolant used was ordinary distilled water which was kept in circulation by means of pumps. The investigations were carried out with superheated and non-superheated steam; water temperatures, in the first case, amounted to 275°C at the input, and 340-365°C at the output; in the second case they were 265° and 310°C, respectively (with a 25% steam content). The places where samples were taken are given in Fig. 1; the β- and γ-activity was measured on all coolant samples, and the quantity of the dry residue, the pH-value, as well as the radioisotopic, anionic, and cationic components of the contamination were determined. The transfer of radioactive substances was determined from the change in radioactivity of the dry residue along the loop. Table 2 gives a multiple of numerical values of the radioactivity of the dry residue of the coolant determined at various places in circuit II. The

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time-dependent change in these radioactivities at various places of the loop are shown in Fig. 2. The results obtained by physicochemical investigations of feed water and the water of cycles I and II are given in Table 3. It supplies the following data: dry residue, total activity (β + γ), pH, CO_2-, SO_3^{-}-, Cl'-concentration, total chromium concentration, CrO_4^{-}- and Cr^{3+}-concentration. The contamination consisted of: Co^{60}, Fe^{59}, Cr^{51}, Ca^{45} (4-10% of the total activity); Na^{24}, Cu^{64}, Ni^{65}, Si^{31}, Mn^{56} (90-96% of the total activity). Components with $T_{1/2} < 1$ hour were not taken into account. The radioactivity and chemical stability of the deposits on the tube walls were determined by means of a special device consisting of two equal tubes made from ЭИ-695 (EI-695) steel. Data on outward shape, thickness, radioactivity, and temperature of the walls are given in Table 4, and data on chemical stability in Table 5. The deposits consisted of Co^{60}, Fe^{59}, Cr^{51}, Ca^{45} ($T_{1/2} \geq 27$ days) (70%) and of

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Na^{24}, Cu^{64}, Mn^{56}, Ni^{65}, and Si^{31} ($T_{1/2} \leq 13$ hours) (30%). Finally, a report is given on deactivation experiments undertaken with various aggressive solutions with and without inhibitors. A 6% HCl + Urotropin and a 5% HNO_3 + 2% HCl + $K_2Cr_2O_7$ solution (~ 0.05 g/l) were used as solutions with inhibitors, and a 5% HNO_3 and a 5-7% HCl solution as solutions without inhibitors. The experiments were carried out at 20°C for 24 to 48 hours and at 40-60°C for 2 to 4 hours. The results obtained are described in detail. The authors thank A. K. Krasin for his interest in this investigation. There are 2 figures, 5 tables, and 6 references: 4 Soviet and 2 US.

SUBMITTED: November 23, 1959

Kozlov, V. Ya.

DOLGOV, V. V., KOZLOV, V. Ya., KOCHETKOV, L. A., SUDNITSYN, O. A., [illegible], V. V. and USMANOV, G. M.

"Single-Pass Superheat Experimental Set-Up at the First Atomic Power Station Reactor."

report presented at the IAEA Symposium on Power Reactor Experiments in Vienna Austria, 23-27 Oct 1961.

(report presented by I. I. Bondarenko)

25373

S/089/61/011/001/002/010
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TITLE: Experience from work with the First Nuclear Power Plant

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TEXT: The First Nuclear Power Plant in the USSR, which was the first in the world, has been successfully operated for seven years; this paper presents a short survey of the experiences accumulated during the first six years at this station. The station itself possesses all the eqipment available at a large research reactor. The construction of the Beloyarskaya GRES (Beloyarsk State Regional Electric Power Plant) represents a further development of the First Nuclear Power Plant. The working of the reactor at different power levels: In the so-called "cold state", at 0.01% of the nominal power, the reactor has the lowest power level at which the automatic power regulator can still function; the rise in this level is checked by measuring the neutron flux; the power level can be doubled within 20 sec.

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Heating begins with a rise of the power level to 5% of the nominal power (first cycle: 160-170°C, pressure in the second cycle: 7 - 8 atm), then to 10% of the nominal power (temperature at the entrance to the reactor: 190°C, steam pressure 12.5 atm); these parameters remain unchanged on further increase of power. The total heating time for the system is 3.5 - 4 hours; during this time, nitrogen is blown in the graphite system to remove oxygen. The parameters of the power station for 50, 75, and 100% of the nominal power are given in Table 1. On shutting the reactor, it is first cooled, by utilizing the natural loss of heat, to the temperature of water in the first cycle (110-120°C), which requires 1.5-2 hours. The cooling water is then removed from circulation and cooled; this enables the reactor to be cooled rapidly. Reliability and duration of the reactor's operation depend on the quality of the fuel element; the station works with tube type elements. The fuel is contained between two tubes of nonrusting steel (the inner is 0.4 mm thick and the outer 0.2 mm thick). This kind proved to be particularly reliable; Not a single element has been dislocated during the whole period the station has been in operation. The system of partial renewal of the fuel element is used for guaranteeing the deepest possible burning. (N. A. Dollezhal et al. reported on this at the Second Geneva

Conference, 1958). Numerical data about the consumption are given in Table 2. Deformation of the fuel elements were checked, a deformation of 14.20 ± 0.02 mm of the element jackets was found. Experiments relating to the boiling of water in the fuel channels and determination of the hydrodynamic characteristics of the fuel elements in the reactor were started in 1956. The preliminaries were completed in September 1956, and one channel was brought to boiling operation. This first boiling channel worked for 400 hours at thermal loads of $(0.45 - 0.85)\cdot 10^6 kcal/m^2\cdot hr$ (steam content 5 - 20% by weight, flow rate 250 kg/hr). As the system proved satisfactory, more channels were brought to boiling operation; in the middle of 1957 there were 70 such channels, more than half of the total. The boiling operation was characterized by the following parameters: Steam content at the exit of the channels: 5 - 25% by weight, thermal load $(0.6 - 1.3)\cdot 10^6 kcal/m^2\cdot hr$, water flow rate 0.7 - 1 m/hr at 100 atm and 190°C at the exit. Since superheating of steam constitutes one of the most important methods for increasing efficiency, experiments in this connection were carried out in the following years with a special experimental loop (Fig. 1) to study the methods of bringing the steam to a superheated state. For this, a method of

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starting was perfected which requires only such equipment as is used in normal operation. During the period of transformation of the superheating operation, the superheating channel could either be closed, or it could work without cooling ("dry operation"), or with water cooling. The last named method had a number of advantages. The following starting methods were studied: Starting with continuous increase of the reactor power, starting with decrease of the reactor power, and combined methods (first the former, and then the latter but lowering the power only for about 60 - 70%). To increase the safety of the reactor, a special system was built in 1959 which prevents the escape of the gas - steam mixture into the ventilation system when the tubes of the experimental holes break down. This system "for localizing the damage due to accident" (Fig. 2) not only serves this purpose but also helps to purify the gas after the accident has occurred. The system consists of a cylindrical tank (6.2 m^3) whose lower part (1.8 m^3) is filled with water; in it are placed the cooling coils and special nozzles through which the steam - gas mixture streams into the water in the case of an accident. The gas is introduced in a sensitive gas container. The whole system is placed in a protective container equipped with manometers, thermometers, and dosimeters. There